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EXAMINER

NGUYEN, MERILYN P

ART UNIT	PAPER NUMBER
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2163

DATE MAILED: 09/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/669,822

Applicant(s)

AGUREN, JERRY G.

Examiner

Marilyn P. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-25 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 24 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: Detailed Action.

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DETAILED ACTION

1. In response to the communication dated 06/23/2006, claims 1-25 are pending in this office action.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 stands rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 recites the term "autonomous" which is not described in the specification in search a way that the Examiner can rely on for relevant prior art. The specification keep repeating the term "autonomous of a user", however, there is nowhere that describe how the system "autonomous of a user".

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Regarding claim 1, the recitation of “the receiving by appearing to operate in the client machine namespace and in the client machine file structure” is vague and indefinite because it’s unclear what Applicant means of “the receiving by appearing to operate”. The claim also lacks of insufficient antecedent basis for “the client machine namespace” and “the client machine file structure” at line 4.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 1 stand rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As set forth in MPEP 21 06(II)A:

Identify and understand Any Practical Application Asserted for the Invention The claimed invention as a whole must accomplish a practical application. That is, it must produce a “useful, concrete and tangible result.” State Street, 149 F.3d at 1373, 47USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of “real world” value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96),’ In re Ziegler, 992, F.2d 1 197, 1200-03, 26 USPQZd 1600, 1603-06 (Fed. Cir. 1993)34. Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful.

Apart from the utility requirement of 35 U.S.C. 101, usefulness under the patent eligibility standard requires significant functionality to be present to satisfy the useful result aspect of the practical application requirement. See *Arrhythmia*, 958 F.2d at 1057, 22 USPQ2d at 1036. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make the invention eligible for patenting. For example, a claim directed to a word processing file stored on a disk may satisfy the utility requirement of 35 U.S.C. 101 since the information stored may have some "real world" value. However, the mere fact that the claim may satisfy the utility requirement of 35 U.S.C. 101 does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a "useful, concrete and tangible" result to have a practical application.

The claimed invention is subject to the test of *State Street*, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02. Specifically *State Street* sets forth that the claimed invention must produce a "useful, concrete and tangible result". The Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility states in section IV C. 2 b. (2) (on page 21 in the PDF format):

The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a §101 judicial exception, in that the process claim must set forth a practical application of that §101 judicial exception to produce a real-world result. *Benson*, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had "no substantial practical application").

Claimed invention (Claim 1) recites a method comprising steps of receiving a file, creating an electronic file, creating metadata file regarding the file, and implementing storage strategies for the file based on the metadata which do not provide tangible and useful results. Merely perform receiving, creating and implementing steps does not set forth **a practical application to produce a real world result**, instead it products abstract result. The step of implementing storage strategies does not really do the storing of the file based on storage strategies.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 15-18 stand rejected under 35 U.S.C. 102(e) as being anticipated by Mikesell (US 2004/0153479).

Regarding claim 15, Mikesell discloses a system (Fig. 1) comprising:

- a client computer (User 130, Fig. 1);
- a server coupled to the client computer (Server 120, Fig. 1);

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- a first storage device coupled to the server having a storage attribute (smart storage unit 0, Fig. 1);
- a second storage device coupled to the server having a storage attribute (smart storage unit 1, Fig. 1);

wherein the server appears to programs executing on the client computer as a network storage device operating in a user namespace and in a user file structure (See paragraph [0076]); and

wherein the server stores the file on at least one of the first and second storage devices in a global namespace, the selection of the storage location made by the server based on the attributes of the storage devices and storage preferences for the file (See paragraph [0076]).

Regarding claim 16, Mikesell discloses wherein the server further comprises:

a software agent executing on the server (communication medium 140, Fig. 1);

wherein the software agent interfaces with the client computer (user 130, Fig. 1) and simulates the network storage device (distributed file system 110) operating in the user namespace; and

wherein the software agent decides on which of the first and second storage devices to store the file based on the attributes of the storage devices and the storage preference for the file (See paragraph [0076]).

Regarding claim 17, Mikesell discloses wherein the server further comprises:

a software service executing on the server (switch 125, Fig. 1); and

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wherein the software service stores the file on one of the first and second storage devices based on instructions from the software agent (See Fig. 15 and paragraph [0068]).

Regarding claim 18, Mikesell discloses:

a first software service associated with the first storage device, the first software service executing on the server;

a second software service associated with the second storage device, the second software service executing on the server; and

wherein the software agent directs at least one of the first and second software services to store the file on the storage device to which the software service is associated. Please see Fig. 1, Switch 125 and paragraph [0068]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 8-14 and 19-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cannon (US 5,983,239), in view of Mikesell (US 2004/0153479).

Regarding claim 8, Cannon discloses a computing system (Fig. 1) comprising:

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- a host computer adapted to execute user programs (Data processing Apparatus 108, Fig. 1);
- a server coupled to the host computer (Data storage subsystem 102, fig. 1);
- a plurality of storage devices coupled to the server (Storage hierarchy 114, Fig. 1);
- wherein the host computer communicates files to the server for storage on at least one of the plurality of storage devices (See col. 6, lines 15-29 and col. 14, lines 40-49); and
- wherein a program executing on the server selects on which of the plurality of storage devices to store the files based on storage characteristic preferences supplied for each file (See col. 6, lines 29-34 and line 65 to col. 7, line 7).

Cannon teaches store the files in the storage hierarchy and determine where files are stored in the storage hierarchy 114/400 of Fig. 4 (See col. 14, lines 40-49, Cannon et al.).

Cannon is silent as to store the files on file-by-file basis. However, it's well-known in the art the files store on file-by-file basis. One having ordinary skill in the art would have recognized that files are being store by one file after another file, thus is well known.

Cannon is silent as to wherein the server appears to be a network storage device operating in a user namespace and in a user file structure and wherein each file is stored under a globally unique name in a global namespace of the server. On the other hand, Mikesell teaches the server 120 appears to be a network storage device (Intelligent distributed file system 110, Mikesell et al.) operating in a user namespace and a user file structure (hierarchical name system) and

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wherein each file is stored under a globally unique name in a global namespace (VFS namespace) of the server (See page 6, paragraph [0076], Mikesell et al.). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include user namespace and global namespace to the system of Cannon. The motivation would have been to handle data and metadata structure lookup and management (See page 6, paragraph [0076], lines 4-5, Mikesell et al.).

Regarding claim 9, Cannon/Mikesell further discloses supplying, by at least one of the user and a system administrator, a desired access speed for the file (See col. 28, claim 9, Cannon et al.).

Regarding claim 10, Cannon/Mikesell discloses supplying, by at least one of the user and a system administrator, a desired reliability for the file (See col. 8, lines 45-58, col. 12, line 60 to col. 13, line 40 and col. 28, lines 7-8, Cannon et al.).

Regarding claims 11 and 22, Cannon/Mikesell discloses moving, by a software agent, the file to a different set of one or more storage devices based on the metadata (See col. 16, lines 38-51, Cannon et al.).

Regarding claims 12 and 23, Cannon/Mikesell discloses wherein the program executing on the server migrates the file based on expiration of a time period specified in the storage characteristic preferences for the file (See col. 17, line 15 to col. 18, line 20).

Regarding claims 13 and 24, Cannon/Mikesell discloses wherein the program executing on the server migrates the file based on obsolescence of the first of the plurality of storage devices as determined by the programs executing on the Server (See col. 17, lines 19-22).

Regarding claims 14 and 25, Cannon/Mikesell discloses deleting, by a software agent, the file after an expiration of a period of time indicated in the metadata (See col. 15, lines 10-35, Cannon et al.).

Regarding claim 19, this claim have substantially the same limitation as claim 8, therefore, they are rejected on similar grounds.

Regarding claim 20, Cannon/Mikesell further discloses supplying, by at least one of the user and a system administrator, a desired access speed for the file (See col. 28, claim 9, Cannon et al.).

Regarding claim 21, Cannon/Mikesell discloses supplying, by at least one of the user and a system administrator, a desired reliability for the file (See col. 8, lines 45-58, col. 12, line 60 to col. 13, line 40 and col. 28, lines 7-8, Cannon et al.).

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7. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cannon (US 5,983,239), in view of Howard (US 6,519,612), and further in view of Mikesell (US 2004/0153479).

Regarding claim 1, Cannon discloses a computer readable medium storing a program that when executed by a processor, performs a method comprising:

- creating an electronic file (user files) in a computer system (See col. 5, lines 34-35);
- creating metadata regarding the file (database 113, Fig. 1 and col. 6, lines 30-35 and col. 7, lines 47-52), and wherein the metadata defines at least in part data management preferences for the file (See col. 6, lines 30-35); and
- implementing, storage strategies for the file based on the metadata (See col. 6, line 65 to col. 7, line 7).

However, Cannon is silent as to implementing storage strategies autonomously of a user of the file based on the metadata. On the other hand, Howard teaches implementing storage strategies autonomously of a user of the file based on the metadata (See col. 20, lines 6-27 and col. 25, lines 50-52, Howard et al.). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement storage strategies autonomously of a user. The motivation would have been to provide updated system to the current state of storage without user intervention relay (See col. 20, lines 25-27, Howard et al.)

Cannon, in combination with Howard, is silent as to wherein the server appears to be a network storage device operating in a user namespace and in a user file structure and wherein each file is stored under a globally unique name in a global namespace of the server. On the

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other hand, Mikesell teaches the server 120 appears to be a network storage device (Intelligent distributed file system 110, Mikesell et al.) operating in a user namespace and a user file structure (hierarchical name system) and wherein each file is stored under a globally unique name in a global namespace (VFS namespace) of the server (See page 6, paragraph [0076], Mikesell et al.). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include user namespace and global namespace to the system of Cannon, in combination with Howard. The motivation would have been to handle data and metadata structure lookup and management (See page 6, paragraph [0076], lines 4-5, Mikesell et al.).

Regarding claim 2, Cannon/Howard/Mikesell further discloses supplying, by at least one of the user and a system administrator, a desired access speed for the file (See col. 28, claim 9, Cannon et al.).

Regarding claim 3, Cannon/Howard/Mikesell discloses supplying, by at least one of the user and a system administrator, a desired reliability for the file (See col. 8, lines 45-58, col. 12, line 60 to col. 13, line 40 and col. 28, lines 7-8, Cannon et al.).

Regarding claim 4, Cannon/Howard/Mikesell discloses wherein implementing storage strategies based on the metadata further comprises storing the file on one or more storage devices selected by a software agent based on the metadata (See col. 14, lines 40-49, Cannon et al.).

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Regarding claim 5, Cannon/Howard/Mikesell discloses moving, by a software agent, the file to a different set of one or more storage devices based on the metadata (See col. 16, lines 38-51, Cannon et al.).

Regarding claim 6, Cannon/Howard/Mikesell discloses deleting, by a software agent, the file after an expiration of a period of time indicated in the metadata (See col. 15, lines 10-35, Cannon et al.).

Regarding claim 7, Cannon/Howard/Mikesell discloses providing, by a software agent, the file to the user from a storage device without the user having to select the source from which the file is provided (See col. 14, line 61 to col. 15, line 7, Cannon et al.).

Response to Arguments

8. Applicant's arguments filed on 06/23/2006 about the claim rejection of the last Office Action have been fully considered, but they are not persuasive.

Response to Applicant's Remarks on 112 Rejections:

Applicant argues "it is noted that "autonomous of the user" limitation is not a global limitation regarding claim 1, but is rather a further refinement of the implementing limitation. Thus, it follows that the user can partake in other limitations, e.g., creating metadata. Implementing a storage strategy "autonomous of the user" is discussed throughout the specification. As an example, the Examiner's attention is drawn to Applicant's Figure 4 and related disclosure". The Examiner respectfully disagrees. As addressed above and also in the

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previous office action, the specification keep repeating the term “autonomous of a user”, however, there is nowhere that describe how the system “autonomous of a user”. The specification does not clearly describe implementing, autonomously of the user of the file, storage strategy. The recited Figure 4 does not show how implementing storage strategy autonomously of the user of the file, thus the rejection stands.

Response to Applicant's Remarks on 101 Rejections:

Applicant states, “Applicant amends claim 1 and its dependent claims to be directed to a computer readable medium storing a program to that implements the method to address the rejection.”

The Examiner respectfully point out that the claim still contain non-statutory subject matter as set forth above in the 101 Rejection section.

Response to Applicant's Remarks on the 102 Rejection as being anticipated by Mikesell (US 2004/0153479).

Applicant argues, Mikesell does not expressly or inherently teach, "wherein the server appears to programs executing on the client computer as a network storage device operating in a user namespace and in a user file structure; and wherein the server stores the file on at least one of the first and second storage devices in a global namespace " and argues that in Mikesell, data files are stored and accessed as a standard file system. The Examiner respectfully disagrees. Paragraph [0076] of page 6 of Mikesell discloses multiple layer for data filed accessing such as Virtual File System layer and Local File System layer, wherein Virtual File System layer

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contains VFS namespace (global namespace) and Local File System layer contains hierarchical naming system such as directory (user namespace).

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marilyn P Nguyen whose telephone number is 571-272-4026. The examiner can normally be reached on M-F: 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone numbers for the

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organization where this application or proceeding is assigned are 571-273-8300 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



MN

September 18, 2006



Primary Examiner